L8 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2000 ACS
TI Ionization and tautomerism of **fluorescein, rhodamine** B, N,N-diethylrhodol and related dyes in mixed and nonaqueous solvents
AU Mchedlov-Petrossyan, Nikolay O.; Kukhtik, Valentina I.; Alekseeva, Vera I.
SO Dyes Pigm. (1994), 24(1), 11-35
CODEN: DYPIDX; ISSN: 0143-7208
AB The protolytic equil. of **fluorescein**, **rhodamine** B and of the asym. amino-oxyxanthene dye, N,N-diethylrhodol (a 'hybrid' of **rhodamine** B and **fluorescein**) were studied in aq. DMSO and EtOH (% org. cosolvent). The **pKa** values of these dyes, as well as of related substances, were detd. On the basis of the visible absorption spectra in various solvents conclusions were made about tautomerism in the dye mols. Values of the tautomeric equil. consts. and of the macroscopic ionization consts. were obtained. Some new data on the tautomerism of oxyxanthene monoanions in MeOH were presented.

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L8 ANSWER 3 OF 9 MEDLINE
TI Phagosomal pH determination by dual fluorescence flow cytometry.
AU Vergne I; Constant P; Daffe M
SO ANALYTICAL BIOCHEMISTRY, (1998 Jan 1) 255 (1) 127-33.
Journal code: 4NK. ISSN: 0003-2697.
AB Several methods have been developed to measure the pH of phagosomes, using **fluorescein** derivatives as reporter of pH, and spectrofluorimetry, fluorescence microscopy, or flow cytometry as quantification technique. All have major disadvantages, including either a slow or inaccurate response. In the present study, pH determination was achieved on J774-cell phagosomes containing dual-labeled zymozan particles using dual fluorescence flow cytometry with an argonion laser excitation wavelength at 488 nm. This allowed zymozan-containing macrophages to be distinguished from other cells and their fluorescence to be measured rapidly. The use of a new probe, namely Oregon Green 488 which has a **pKa** lower than carboxyfluorescein with the same maximum excitation and emission wavelengths, allowed investigation of pH value below 5. The dual labeling with Oregon Green 488 and carboxytetramethylrhodamine as pH-sensitive and pH-insensitive probes, respectively, overcame the absence of an isobestic point in the Oregon Green 488 spectrum. The phagosomal pH was determined using a calibration curve of phagosomal pH established by adding ionophores to phagocyte suspension and measuring the fluorescence intensity ratio (530 nm/585 nm) for different pHs. A phagosomal pH of 4.5 +/- 0.1 can be accurately determined. This method permits pH measurements down to 4, even in the presence of nonengulfed reporter particles.